

Therefore, it would be obvious to one of ordinary skill in the art to preferentially selective[sic] the appropriate radicals needed to prepare the compounds of the present invention. Furthermore it would be within the skill of the art and therefore obvious to use the process taught by Toshiro et al to prepare the peptides of the instant invention, wherein the compounds have antimicrobial activity.

P' While the examiner is correct in the statement that when R1 is acyl, R2 is hydroxyl, R3 is hydrosulfonyloxy, and R4 is carbamoyl, the compounds of the present invention fall within the scope of the invention taught by Toshiro et al., the Examiner has provided no reason why one skilled in the art would be motivated from the teachings of the reference, to pick the specific acyl groups recited in the instant claims. Toshiro et al. discloses that the acyl group may be any of those recited in col.6, lines 32, thru col.8, line 5. This encompasses many more compounds than those recited in claim 1 of the instant application. "The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious." *In re Jones*, 21 USPQ2d 1941,1943 (Fed. Cir. 1992). As was decided in *In re Baird*, 29 USPQ2d 1550 (Fed. Cir. 1994), if the prior art does not suggest the selection of specific variables to formulate the claimed compounds and exemplifies preferred compounds which are different from the claimed compounds, then the generic disclosure of the reference does not provide motivation to make the claimed compounds.

In further support of the non-obviousness of the claimed compounds, applicant provides herewith a Declaration showing the superior antimicrobial activity of the claimed compounds as compared to two of the **most preferred** compounds of Toshiro et al. Compound A shown in the Declaration, is the compound of Example 35 of USP 5,376,634 which is disclosed as being one of the most preferred compounds at col. 9, lines 31-32 and

line 62, e.g., 6-hexyloxy-2-naphthoyl (R_1 = aroyl substituted with lower alkoxy; or lower alkanoyl substituted with aryl substituted with lower alkoxy). Compound B, shown in the Declaration is the compound of Example 45 of USP 5,376,634 which is disclosed as being one of the most preferred compounds at col. 9, line 49, e.g. 3-(4-octyloxyphenyl)acryloyl (R_1 = phenyl alkenoyl substituted with higher alkoxy).

As shown in the Declaration, 0.25 $\mu\text{g/ml}$ is the lowest concentration of **Compound A**, (lower alkanoyl substituted with aryl substituted with lower alkoxy: also known as aroyl substituted with lower alkoxy), at which no visible microbial growth was observed. Whereas only 0.0625 $\mu\text{g/ml}$ of **Compound 2** (lower alkanoyl substituted with aryl which is substituted with higher alkoxy) is needed to provide the same result. This is surprising since the compounds (A and 2) differ only in that **Compound A** contains a **formyl** group and the aryl group is substituted with a **lower** alkoxy; and **Compound 2** contains a **propionyl** group and the aryl group is substituted with a **higher** alkoxy.

Compound 1 (lower alkanoyl substituted with aryl which is substituted with aryl which is substituted with lower alkoxy) also provides unexpectedly superior antimicrobial properties over **Compound A** (lower alkanoyl substituted with aryl substituted with lower alkoxy). This is surprising since these two compounds (A and 1) differ only by one phenyl group.

Compound 4 (R_1 = aroyl substituted with **heterocyclic group which is substituted with phenyl having lower alkoxy**, see instant claim 4), provides no visible microbial growth at a concentration of only 0.0156 $\mu\text{g/ml}$, as compared to **Compound A** (R_1 = aroyl substituted with **lower alkoxy**) in which 0.25 $\mu\text{g/ml}$ is needed to achieve the same result.

0.125 $\mu\text{g/ml}$ of **Compound B** (R_1 = **phenyl** alkenoyl substituted with higher alkoxy), is required in order to prevent visible microbial growth. Whereas only 0.0625 $\mu\text{g/ml}$ of **Compound 3** (R_1 = **naphthyl** alkenoyl substituted with higher alkoxy) is required to achieve

the same result. This is surprising since the two compounds differ only by a phenyl group.

Therefore, it is evident from this data that the compounds of the present invention provide unexpectedly superior antimicrobial properties as compared to the most preferred compounds disclosed in Toshiro et al. This is not suggested by the teachings of the reference and therefore the claims are clearly patentable thereover.

The rejection of claims 1-16 and 19 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of USP 5,374,634 is respectfully traversed.

As stated above, the Examiner has provided no reasoning as to why one skilled in the art would be motivated, **from the claims** of USP 5,376,634 to preferentially select the radicals recited in the claims of the instant application. This is especially the case given the fact that the claims of 5,376,634 recite numerous radicals from which one would have to choose in order to formulate the compounds of the present claims.

Additionally, applicant has shown via Declaration that the compounds of the present invention provide unexpectedly superior antimicrobial properties over the **most preferred** compounds of USP 5,376,634. Therefore, the double patenting rejection should be withdrawn.

It is submitted that the rejection under 35 U.S.C. §112, second paragraph has been mooted by cancellation of claims 17 and 18 and that the Declaration provides a showing of unexpected results with the claimed compounds which is sufficient to rebut any *prima facie* case of obviousness. Therefore, it is believed that the claims are in condition for allowance and a notice to that effect is respectfully requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to be 'S. Kelber', written over a horizontal line.

Steven B. Kelber
Registration No. 30,073
Attorney of Record

Amy L. Hulina
Registration No. 41,556

Fourth Floor
1755 Jefferson Davis Highway
Arlington, Virginia 22202
Telephone No: (703) 413-3000
Facsimile No: (703) 413-2220